# FERROMAGNETIC MAGNETORESISTANCE ELEMENT

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## Abstract

PURPOSE:To enable soldering area when soldering an element to a printed-wiring board to be large, prevent electrode damage due to differences in mechanical vibration and thermal coefficient of expansion, an achieve reliable electrical connection by providing the electrodes not only at one surface of the printed- circuit board but also on the side surface or rear surface.
CONSTITUTION:A resistor pattern 3 consisting of ferromagnetic magnetoresistance material and an electrode 4 consisting of conductive material are formed for a plurality of elements by a series operations in the thin-film process on a plane 2 of a plane-shaped printed-circuit board such as glass or ceramic and this printed-circuit board 1 is subjected to dicing, thus dividing into individual elements 16 to 19. After that, the thin-film process is executed and electrodes 4a and 4a' are provided on a side surface 5 or a rear surface 9 of the printed-circuit board 1. It achieves an electrode strength against burn- out and damage at a soldered part due to distortion caused by mechanical vibration and the difference in thermal coefficient of expansion between the printed-circuit board 1 and the printed-wiring board.